

App. No. 10/672345
Office Action Dated October 25, 2004
Amd. Dated January 19, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-9, 11, 12 and 20-23 are canceled without prejudice or disclaimer.

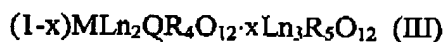
Claims 10, 13 and 24 are amended.

Claims 26-37 are new.

Listing of Claims:

1-9 (Canceled)

10. (Currently Amended) An inorganic oxide expressed by a chemical formula III



where M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba, wherein M is 50 atomic % or more of Ba;

Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;

Q is at least one element selected from the group consisting of Si, Ge, Sn, and Pb;

R is at least one element selected from the group consisting of B, Al, Ga, In, and Tl; and

x is in a range of $0 < x \leq 0.98$ $0 \leq x \leq 0.7$.

11-12 (Canceled)

13. (Currently Amended) The inorganic oxide according to claim [[12]] 10, wherein the range of x is $0 < x \leq 0.5$ $0 \leq x \leq 0.5$.

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14. (Original) The inorganic oxide according to claim 10, wherein the Ln is at least one rare earth element selected from the group consisting of Sc, Y, La and Gd, the Q is at least one element selected from the group consisting of Si and Ge, and the R is at least one element selected from the group consisting of B, Al and Ga.

15. (Original) The inorganic oxide according to claim 14, wherein the majority of the Ln is made up of Y.

16. (Original) The inorganic oxide according to claim 14, wherein the majority of the Q is made up of Si.

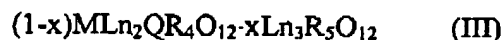
17. (Original) The inorganic oxide according to claim 14, wherein the majority of the R is made up of at least one selected from Al and Ga.

18. (Original) The inorganic oxide according to claim 10, wherein the inorganic oxide has a garnet crystal structure.

19. (Original) The inorganic oxide according to claim 10, wherein the inorganic oxide further comprises at least one rare earth element selected from the group consisting of Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu.

20-23 (Cancelled)

24. (Currently Amended) A phosphor having an inorganic oxide expressed by a chemical formula III as a phosphor host or an active component



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where M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba,
wherein M is 50 atomic % or more of Ba;

Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;

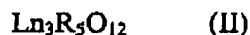
Q is at least one element selected from the group consisting of Si, Ge, Sn, and Pb;

R is at least one element selected from the group consisting of B, Al, Ga, In, and Tl; and

x is in a range of $0 < x \leq 0.98$ $0 \leq x \leq 0.7$.

25. (Original) The phosphor according to claim 24, further comprising at least one selected from the group consisting of Ce^{3+} ions, Pr^{3+} ions, Eu^{3+} ions, and Tb^{3+} ions as a luminescent center of the phosphor.

26. (New) The inorganic oxide according to claim 10, which is a solid solution in which an inorganic oxide expressed by a chemical formula II below is doped into the inorganic oxide expressed by the chemical formula I below



where M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba;

Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;

Q is at least one element selected from the group consisting of Si, Ge, Sn, and Pb; and

R is at least one element selected from the group consisting of B, Al and Ga.

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27. (New) The inorganic oxide according to claim 26, wherein a ratio of the inorganic oxide expressed by the chemical formula I and the inorganic oxide expressed by the chemical formula II is I : II = 1:99 to 99:1 in weight ratio.
28. (New) The inorganic oxide according to claim 26, wherein a combination of M is mainly Ba and Q is mainly Si.
29. (New) The inorganic oxide according to claim 26, wherein a Ln is mainly Y.
30. (New) The inorganic oxide according to claim 26, wherein R is mainly Al.
31. (New) The inorganic oxide according to claim 26, wherein the inorganic oxide further comprises at least one rare earth element selected from the group consisting of Ce, Pr, Eu, Tb.
32. (New) The inorganic oxide according to claim 26, further comprising at least one selected from the group consisting of Ce³⁺ ions, Pr³⁺ ions, Eu³⁺ ions, and Tb³⁺ ions as a luminescent center of the phosphor.
33. (New) An inorganic oxide expressed by a chemical formula I below



wherein the inorganic oxide has a hexagonal crystal structure or a perovskite structure,
M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba;
Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;
Q is Si; and
R is B or Al.

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34. (New) The inorganic oxide according to claim 33, wherein a combination of M is mainly Sr or Ba and Ln is mainly Y or Gd.
35. (New) The inorganic oxide according to claim 33, wherein R is B.
36. (New) The inorganic oxide according to claim 33, wherein M is mainly Sr and Ln is mainly Gd.
37. (New) The inorganic oxide according to claim 33, further comprising at least one selected from the group consisting of Ce^{3+} ions, Pr^{3+} ions, Eu^{3+} ions, and Tb^{3+} ions as a luminescent center of the phosphor.